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Original Article

The Importance of Using Marketing Information Systems in Five Stars Hotels Working in Jordan: Empirical Study

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Abstract

The aim of this study is to explore the effect of marketing information systems usage on market share through exploring internal records, marketing intelligence, market research and marketing decision support system on the overall market share. The population of the study consisted of tourism hotels operating in Jordan totaling 24 hotels categorized as five stars hotels. The researcher distributed 120 questionnaires (Five for each hotel), 85 questionnaires were retrieved with a percentage of 74.2%. The study concluded the following findings:

There is a strong positive effect between internal records and served market share, and a moderate positive effect between internal records and overall market share. There was no positive effect between relative market share and internal records. There is a moderate positive effect between marketing intelligence and overall market share. Moreover, in a weak degree between marketing intelligence and served market share; as well as there was no positive effect between relative market share and marketing intelligence. There was a moderate positive effect between marketing researches and overall market share. There was no positive effect between served market share and relative market share. There was a moderate positive effect between marketing decision support systems and the overall market share and in a weak degree with served market share. There was no positive effect with relative market share. Based on the findings of the study the researcher presented several recommendations.

1. Introduction

Information systems had became one of the important means used in marketing nowadays, it is the most effective tool in marketing through helping in decision making as well as solving all marketing problems. Additionally, information systems can link the organizations' policy and organize them in order to facilitate the marketing decision towards ant product or customer [1].

The success of marketing administration in planning and identifying marketing opportunities is based highly on the availability of internal and external information. Therefore, every organization must organize and distribute the flow of information for marketing managers and study their needs to provide them with needed information [2]. Today, it is necessary to obtain successful marketing information systems to be able to execute many marketing activities such as attracting customers, evaluating services as well as advertisement and promotion [3].

Marketing information system is a "system in which marketing data is formally gathered, stored, analyzed and distributed to managers in accordance with their informational needs on a regular basis [4]. In addition, the online business dictionary defines Marketing Information System as "a system that analyzes and assesses marketing information, gathered continuously from sources inside and outside an organization [1]. Thus, the current study is seeking to investigate the effect of marketing information systems usage on market share through exploring internal records, marketing intelligence, market research and marketing decision support system on the overall market share.

1.1 Statement of purpose

Because of the severe competition resulted due to the rapid changes of our world today, it became a necessity to obtain an information marketing system to operate and organize those information for the benefit of decision making. Moreover, the field visits for many Jordanian hotels showed that there is a considerable interest in marketing information systems to enable decision makers from monitoring tourism activities. However, there is a variance in employees' understanding for those systems and its effect on market share. Thus, the current study is seeking to answer the following questions:

1. What is the effect of marketing information systems on the market share of Jordanian hotels?. This question has four sub-questions:
- What is the role of internal records and its effect on the market share (total and the share of the served market)?
- What is the role of market intelligence and its effect on the market share (total and the share of the served market)?
- What is the role of market research and its effect on the market share (total and the share of the served market)?
- What is the role of marketing decisions support systems and its effect on the market share (total and the share of the served market)?
2. Are there any significant statistical differences between the market share and demographic variables (gender, age, educational level, experience and post)?

1.2 Significance of the study

The importance of this study emerged from its purpose as it seeks to reach several findings benefiting researchers on both practical and scientifically levels. This can be summarized as follows:

Scientific importance: The scientific importance of this study is represented from its goal of rooting an important issue regarding marketing in the tourism sector especially using marketing information systems.

Practical Importance: The practical importance is emerged from the goal of this study which is investigating effect of marketing information systems usage on market share through exploring internal records, marketing intelligence, market research and marketing decision support system on the overall market share.

1.3 Definition of terms

Marketing Information Systems: A continuous organized process to record, categorize, store and analysis of past, current and future information related to hotels business and the factors affecting it in order to obtain accurate marketing decisions to achieve the aim of the

hotels- the sample of this study-. The components of those systems are:

Internal records: It is the data collected as a database about the daily processes of the hotels –study sample-. These records include the needed data to acquire information related to the measurement of the current performance in sales, costs, storage, cash flow, debts and credits.

Marketing intelligence: the means of the administration to see and know the recent circumstances inside and outside the hotel.

Marketing Research: Data collection and analysis to determine the problems as well as opportunities and threats facing the hotels – sample of the study.

Marketing decisions support systems: Systems explaining information in order to make marketing decisions as those systems allow decision makers to connect directly to the database consisting of computers and communication networks.

Market Share: the part of the market dominated by the hotels as this market consumes services through the umber of customers. The share can be measured though the total shares of the market and the share of the served market as well as the relative share of the market [4].

1.4 Previous studies

This section presents several previous studies related to the issue of this study directly and indirectly.

Al- qatameen [5] in 1995 studied the nature and direction of the relationship between the market share and the performance of insurance organizations in Jordan. The study drew ten liner models and used descriptive statistics to conclude that there is a positive significant effect between the market share and the performance of insurance organizations in for casual models and six different models and there is a strong relation between the two variables.

Chung [6] in 2000 examines pricing strategies and business performances of super deluxe hotels in Seoul. To achieve this purpose, empirical research is conducted on the basis of data from 1989, when the formation of the present product life cycle stage and the market structure began, to 1996. Through quick cluster and regression analysis, a separation of the price competition between groups of hotels is identified. By ANOVA, pricing strategies and market shares of selected leading hotels are compared. As a longitudinal study**,** the same research design is applied based on four two-year periods. The final part of the paper evaluates the results of the statistical analysis and discusses important findings and implications of the four two-year periods, respectively.

Abu-ramadan [7] in 2000 evaluated the role of administrative information systems in administrative decision making in the University of Jordan. The sample of the study consisted of (186) individuals presenting (79.1) of the population, while the valid questionnaires were only (86). The findings of the study showed that there is an average to high use of those systems and there is a strong to very strong relationship between the accuracy of information and the process of decision making among mangers.

West & Hess [8] (2004) stated that marketing information systems (MKLS) are decision support systems targeted at marketing-specific decisions. One of the most widely disseminated MKIS models divides the marketing decision universe into four domains and links these domains to each other and to other marketing activities. Unfortunately, there is little guidance on the construction of specific MKJS targeted at problems in these domains or to the construction of integrated MKIS that span domains. This paper advocates the use of geographic information systems (GIS) as a DSS generator for constructing MKIS. The paper reviews the technical capabilities of GIS and shows how these capabilities align with accepted elements of MKIS. We see that a unique advantage of GIS over other MKLS technologies is its ability to integrate information from disparate sources and spanning multiple decision domains when a single decision requires this capability. The paper then uses a decision making resource-based approach and the four elements of the marketing mix to propose a research agenda for increasing our understanding of GIS as an MKJS technology.

Berardinucci [9] in 2005 investigated the external exporting barriers that Jordanian's SMEs face when engaging in international environment and to concentrates on the issue of export performance and its determinants among indigenous firms in Jordan. Based on the aim of this study, a questionnaire based survey method was conducted among 250 Jordanians manufacturing SMEs using random sampling method with usable response rate of 54 percent. Data were analyzed using relevant statistical tests ranging from t test to regression analysis. Governmental, economic, political, and legal barriers were identified as being significantly important. Also, the results show that exporters and non exporters largely agree in their views of the various barriers. Moreover, it was found that SMEs' performance strongly related to the external exporting barriers with negative relationship considered by way of their level of export activities. The study was carried out on companies operating in Jordan. Hence, caution should be taken when generalization across cultures is considered. However, the findings of the study provide public and company policy makers with valuable guidelines for the formulation of suitable export marketing strategies and national export assistance programs.

In another study Wober[2] in 2006 clarified that the accurate information is a needed requirement for the efficiency of marketing process among Austrian tourism companies and the continues access of those information will enhance the market share of those companies.

To conclude the current study differs from previous studies in its goal and procedures as there were no studies especially in Jordan about the effect of marketing information systems on the market share of Jordanian tourism hotels.

2. Methodology

This section describes the sample of the current study, study tool, validity and reliability procedures. It also presents it the statistics that used in the analysis of data, and extract the results, this study belongs to a type of descriptive research survey aimed to, analysis, and evaluate of the characteristics of a particular group, or a certain position dominated by the recipe selection.

2.1 Study Population and Sample

The population of this study is all five stars hotels totaling (24) hotels. The researcher selected all the hotels through comprehensive survey. The researcher administrated the questionnaire on the marketing staff in all those hotels (n=120) and retrieved (89) valid questionnaires with a rate of (74.2%). Table (1) presents the distribution of the sample according to the study variables

Table (1): The distribution of the sample according to the study variables

Variable	Category	Frequency	Rate
Gender	Male	35	39.3
	Female	54	60.7
Age	20 to 30-yrs	50	56.1
	30yrs to 40-yrs	24	27.0
	40 yrs to 50-yrs	15	16.9
Educational level	Diploma	18	20.2
	Undergraduate	59	66.3
	graduate	12	13.5
Total Experience	1 to 5-yrs	30	33.7
	5yrs to 10- yrs	29	32.6
	10 yrs to 15-yrs	9	10.1
	15yrs to 20- yrs	15	16.9
	20yrs +	6	6.7
Post	Sales manger	17	19.2
	Marketing manager	22	24.7
	Quality manager	14	15.7
	other	36	40.4
Experience in recent job	Less than 5yrs	44	49.4
	5yrs to 10- yrs	24	27.0
	10 yrs to 15- yrs	9	10.1
	15 yrs +	12	13.5
Level	Top management	5	5.6
	Middle management	69	77.5
	Low management	15	16.9
total		89	100.0

2.2 Study Tool

The researcher reviewed the related literature and as well as previous Arabic and foreign studies to develop a questionnaire. The questionnaire was administrated on all marketing mangers, sales mangers and all people working in marketing. The questionnaire consisted of three parts: the first contains the demographic information of the respondent, the second contained the domains of marketing systems within (14) indicators measuring marketing information systems as described by Kotler and the third consisted of kotlers' indicators for the market share[10].

2.3 Instrument Validity

Validity was established through content and face validity, and the instrument was standardized on the response of an experts group of in Jordanian universities. The raters canceled items and modified other items. The researcher modified the tool as mentioned by the raters.

2.4 Instrument reliability

Reliability of the instrument was determined through a pilot study; sample of 20 respondents from of the study population. The reliability coefficient was (0.84) for marketing information systems and (0.85) for the tool as a whole, and it seemed to be reliable for use a Jordanian population.

2.5 Statistical measures

Data was processed through SPSS software by coding the variables in a clear way as well as recording each variable and its symbol as in the list. Then data were processed in the computer according to certain measures such as reliability measures, simple regression, F-test, correlation coefficient, ANOVA and multiple regressions. Then data were processed in the computer according to the following method: 1-2.49 presenting weak positive degree, 2.5 – 3.49 average positive degree and 3.5- 5.00 high positive degrees.

3. Study Findings

The first question: What is the effect of marketing information system on the market share of Jordanian hotels?

To answer this question means and standard deviations were calculated for al domains as follows:

Means and standard deviations for the role of study domains and its effect on the market share were calculated as shown in table (2)

Table (2): Means and standard deviations for the role of study domains and its effect on the market share

Rank	Domain	M	SD	Degree
1	Internal Records	4.36	0.49	High
2	Marketing Researches	4.12	0.58	High
3	Marketing intelligence	4.10	0.36	High
4	Systems of supporting marketing decisions	3.96	0.51	High

Table (2) shows that the means of study domains ranged between (4.36- 3.96) showing high positive effect on market share. Internal records came in the first rank with a mean of (4.36) while Systems of supporting marketing decisions came in the last rank but in a high positive degree.

For the relationship between marketing information systems and market share the researcher used the simple regression to calculate this relationship as shown in the following tables

Table (3) Simple regression analysis for the effect of internal records on the market share of Jordanian hotels

Sig.	F	Beta	R^2	R	
.000	13.904	.371	.138	.371	**Total market share**
.000	41.862	.570	.325	.570	**Share of served market**
.714	.135	-.039	.002	.039	**Relative market share**

Table (3) shows that there is a positive effect between all marketing information systems and the market share in all its domains.

Table (4) Simple regression analysis for the effect of marketing intelligences on the market share of Jordanian hotels

Sig.	F	Beta	R^2	R	
.003	9.167	.309	.095	.309	**Total market share**
.008	7.288	.278	.077	.278	**Share of served market**
.840	.041	.022	.000	.022	**Relative market share**

Table (4) shows that there is a positive effect between all marketing intelligences and the market share except in the relative market share.

Table (5) Simple regression analysis for the effect of marketing researches on the market share of Jordanian hotels

Sig.	F	Beta	R^2	R	
.000	26.655	.484	.235	.484	**Total market share**
.452	.572	-.081	.007	.081	**Share of served market**
.306	1.058	.110	.012	.110	**Relative market share**

Table (5) shows that there is a positive effect between all marketing researches and total market share while, there is no effect on the rest of the domains

Table (6) Simple regression analysis for the effect of marketing information support systems on the market share of Jordanian hotels

Sig.	F	Beta	R^2	R	
.000	18.879	.422	.178	.422	**Total market share**
.047	4.079	.212	.045	.212	**Share of served market**
.126	2.389	.163	.027	.163	**Relative market share**

Table (6) shows that there is a positive effect between all marketing intelligences and the market share except in the relative market share.

With regard to the relationship between marketing information systems and the market share the researcher used Pearson coefficient as shown in table (7)

Table (7) Pearson coefficient of the relationship between marketing information systems and the market share

Relative market share	Share of served market	Total market share		
-.039	.570**	.371**	R	Internal records
.714	.000	.000	Sig	
89	89	89	No	
.022	.278**	.309**	R	Marketing
.840	.008	.003	Sig	intelligences
89	89	89	No	
.110	-.081	.484**	R	Marketing Research
.306	.452	.000	Sig	
89	89	89	No	
.163	.212*	.422**	R	Marketing supporting
.126	.047	.000	Sig	systems
89	89	89	No	

Table (7) shows that there is significant positive relationship at the level of ($\alpha \leq 0.05$) between internal records, marketing intelligences, marketing researches and marketing information supporting systems and both total market share and share of served market and between

The second question: Are there any significant statistical differences between the market share and demographic variables (gender, age, educational level, experience and post)?

To answer this question means, standard deviation and (t) test were used for the relationship between gender, age, experience, post and market share.

First: gender

Table (8) means, standard deviation and (t) test were used for the relationship between gender and market share

	gender	No	M	SD	T	F	Sig
Total market share	**male**	**35**	3.90	.638	-2.156	87	.034
	Female	**54**	4.13	.344			
Share of served market	**male**	**35**	4.15	.496	.234	87	.816
	Female	**54**	4.13	.458			
Relative market share	**male**	**35**	4.30	.265	1.351	87	.180
	Female	**54**	4.19	.419			

Table (8) shows that there were no significant statistical difference at the level of ($\alpha \leq 0.05$) attributed to gender in the share of served market or relative market share except for the total market share in favor of females.

Second: age

Table (9) means, standard deviation were used for the relationship between age and market share

	age	No	M	SD
Total market share	20 to 30-yrs	**50**	4.03	.556
	30yrs to 40-yrs	**24**	4.30	.240
	40 yrs to 50-yrs	**15**	4.04	.491
Share of served market	20 to 30-yrs	**50**	4.19	.469
	30yrs to 40-yrs	**24**	4.16	.513
	40 yrs to 50-yrs	**15**	3.91	.357
Relative market share	20 to 30-yrs	**50**	4.19	.370
	30yrs to 40-yrs	**24**	4.18	.398
	40 yrs to 50-yrs	**15**	4.46	.217

Table (9) shown that there are differences according to age category. Therefore, ANOVA was used to obtain those differences as shown in table (10)

Table (10) ANOVA analysis for the effect of age in market share

Sig	F	M	T	Cq	Source	
.061	2.890	.667	2	1.335	between groups	**Total market share**
		.231	86	19.859	In groups	
			88	21.194	total	
.129	2.094	.453	2	.906	between groups	**Share of served market**
		.216	86	18.601	In groups	
			88	19.507	total	
.033	3.554	.456	2	.911	between groups	**Relative market share**
		.128	86	11.023	In groups	
			88	11.934	total	

Table (10)shows that there were no significant statistical difference at the level of ($\alpha \leq 0.05$) attributed to age except between 2- to less than 30 and 40 to less than 50 in favor of the latter.

Third: Educational level

Table (11) means, standard deviation were used for the relationship between gender and market share

	age	No	M	SD
Total market share	Diploma	18	4.13	.306
	undergraduate	59	3.98	.554
	graduate	12	4.19	.326
Total		**89**	4.04	.491
Share of served market	Diploma	18	4.14	.679
	undergraduate	59	4.10	.372
	graduate	12	4.29	.548
Total		**89**	4.14	.471
Relative market share	Diploma	18	4.14	.350
	undergraduate	59	4.22	.386
	graduate	12	4.43	.236
Total		**89**	4.23	.368

Table (11) shown that there are differences according to educational level category. Therefore, ANOVA was used to obtain those differences as shown in table (12)

Table (12) ANOVA analysis for the effect of educational level in market share

Sig	F	M	T	Cq	Source	
.284	1.276	.305	2	.611	between groups	**Total market share**
		.239	86	20.583	In groups	
			88	21.194	total	
.480	.739	.165	2	.330	between groups	**Share of served market**
		.223	86	19.177	In groups	
			88	19.507	total	
.103	2.335	.307	2	.615	between groups	**Relative market share**
		.132	86	11.319	In groups	
					total	

Table (12) shows that there were no significant statistical differences at the level of ($\alpha \leq 0.05$) attributed to educational level.

Fourth: Experience

Table (13) means, standard deviation were used for the relationship between experience and market share

	age	No	M	SD
Total market share	1 to 5-yrs	30	4.18	.249
	5yrs to 10- yrs	29	3.76	.671
	10 yrs to 15-yrs	9	3.79	.348
	15yrs to 20- yrs	15	4.25	.200
	20yrs +	6	4.50	.000
Total		89	4.04	.491
Share of served market	1 to 5-yrs	30	4.30	.452
	5yrs to 10- yrs	29	4.20	.468
	10 yrs to 15-yrs	9	3.95	.635
	15yrs to 20- yrs	15	3.80	.304
	20yrs +	6	4.14	.000
Total		89	4.14	.471
Relative market share	1 to 5-yrs	30	4.23	.374
	5yrs to 10- yrs	29	4.14	.401
	10 yrs to 15-yrs	9	4.43	.247
	15yrs to 20- yrs	15	4.17	.329
	20yrs +	6	4.57	.000
Total		89	4.23	.368

Table (13) shows that there were significant statistical difference at the level of ($\alpha \leq 0.05$) attributed to years of experience between 1 to less than 5 years in favor of the first and 5 to less than 10 years in favor of 1 to less than 5 years. Moreover, there were differences between 5 to less than 10 years and 15 to less than 20 years in favor of the latter. There were differences between 15 to less than 20 years and more than 20 years in favor of the latter, and for 20 years and more in the total market share.

There were significant statistical difference at the level of ($\alpha \leq 0.05$) between 1 to less than five years and 15 to less than 20 years in favor of the first and between 5 to less than 10 years and 15 to less than 20 years in favor of the first and the differences were in favor of 5 to less than 10 years in the favor of the served market share. With regard to the relative market share the differences were too low and insignificant.

Fifth: Post

Table (14) means, standard deviation were used for the relationship between post and market share

	age	No	M	SD
Total market share	Sales manger	17	3.88	.402
	Marketing manager	22	4.00	.469
	Quality manager	14	3.62	.739
	other	36	4.28	.214
Total		89	4.04	.491
Share of served market	Sales manger	17	4.14	.422
	Marketing manager	22	4.11	.544
	Quality manager	14	3.92	.717
	other	36	4.24	.246
Total		89	4.14	.471
Relative market share	Sales manger	17	4.21	.441
	Marketing manager	22	4.25	.405
	Quality manager	14	4.07	.175
	other	36	4.29	.365
Total		89	4.23	.368

Table (14) shows that there were significant statistical difference at the level of ($\alpha \leq 0.05$) attributed to post between sales manager and other category in favor of sales manager, and between marketing manager and quality manager in favor of marketing manager as well as quality manager and other category in favor of other category.

4. Discussion

Based on the findings it was evident that there is a positive effect ranged from weak to strong between marketing information systems and the share of the served market. The researcher found that the hotels use marketing information systems in a high degree through using databases and stored reports in internal records to plan their marketing plans as well as determining threats and strength points through information analysis. Additionally, the role of market

intelligence in analyzing the internal and external marketing information to know the needs of customers or the market as well as the efficiency of supporting systems to enhance marketing decisions. This result is consistent of previous studies such as Al- qatameen[5] (1995) and wober [2](2006).

Moreover, there were no significant statistical differences between marketing information systems and relative market share. This can be attributed to the actions of the hotels that refuse any non-profitable customers in the local market and directing its efforts for the external market only. This result is consistent with Berardinucci [9](2005) study which concluded that there are no marketing plans in Jordan and Italy as the internet is more efficient to improve marketing performance in both countries.

The findings showed that there is an average positive effect between marketing information systems and the total market share which is attributed to the strong relationship between both variables. Furthermore, the role of effective marketing efforts carried out by some hotels in findings new marketing directions in order to win more customers and improve the services through marketing studies and surveys to investigate their opinions and attitudes.

The findings showed different correlation degrees ranged between strong and weak for the effect of using marketing information as an independent variable and market share as a dependent variable. Those differences can be attributed to the variance in the roles of marketing information systems in affecting the market share and its effective roles in planning, analysis and linking between marketing operations to affect the market positively.

5. Recommendations

Based on the findings of this study the researcher recommends the following:

1) Calling on the hotels of this study to analyze the stored information in their internal records to determine threats and strength points to make fruitful plans and initiate positive relationships with different markets.
2) Calling on the hotels of this study to make plans to link threats and opportunities in the marketing systems with environment survey to develop marketing opportunities.
3) The continuous promotion on both local and international levels and offering competitive prices and services.
4) Conducting more studies regarding marketing information systems with other marketing variables.
5) Conducting more studies about marketing information systems.

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